

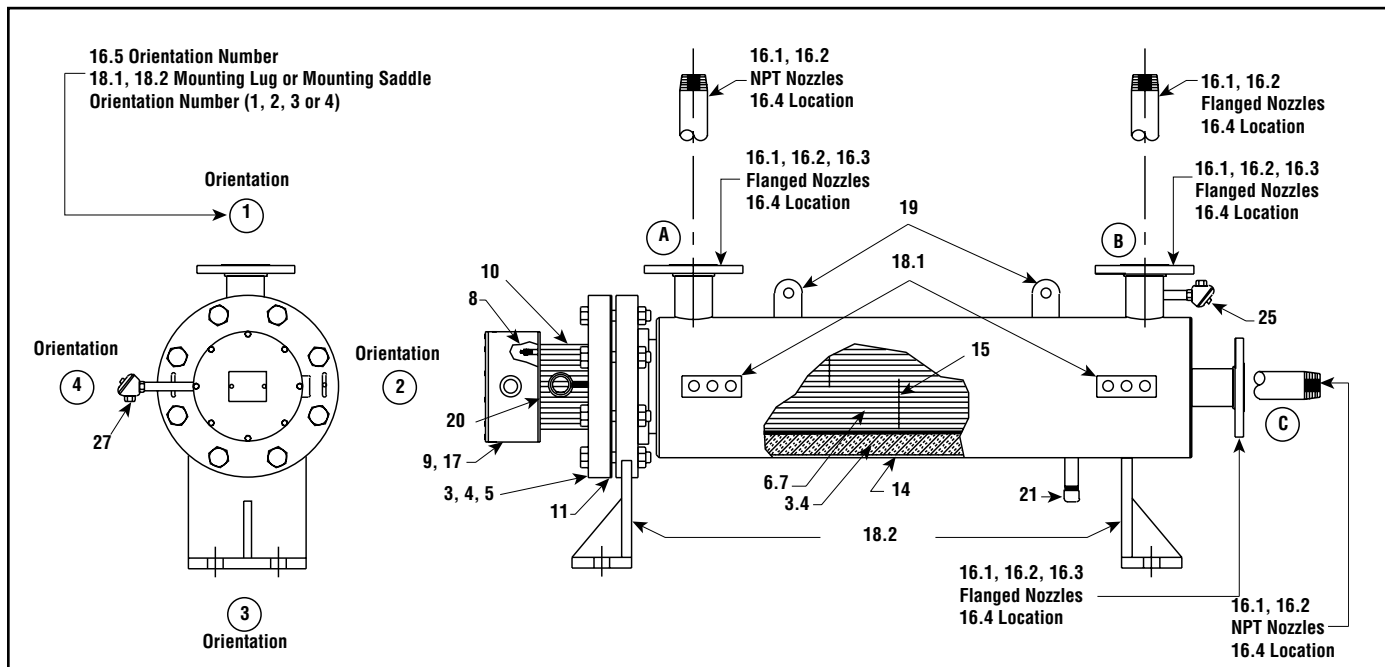
## Circulation Heater Systems

### ASME & Custom Engineering Specifications *(cont'd.)*

Form PE307

Customer Name: \_\_\_\_\_ Reference: \_\_\_\_\_ Date: \_\_\_\_\_

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**Note** — Drawing is for Illustration Purposes Only. The flange size, number of heating elements, terminal enclosure configuration etc., will vary according to options selected.

<i>Operating Conditions</i>		<i>4. FLANGE AND VESSEL MATERIAL:</i>	
<b>1. HEATED MEDIUM:</b>		<input type="checkbox"/> Carbon Steel	<input type="checkbox"/> Carbon Steel-Galvanized
<b>2. TEMPERATURE IN:</b> °F	<b>TEMPERATURE OUT:</b> °F	<input type="checkbox"/> 304 Stainless Steel	<input type="checkbox"/> Other ( <i>Specify</i> )
<b>3. FLOW RATE:</b>	SCFM or      GPM or	<b>5. FLANGE RATING:</b> <input type="checkbox"/> Class 150 <input type="checkbox"/> Class 300 <input type="checkbox"/> Other ( <i>Specify</i> )	
	Lbs/Hr or <input type="checkbox"/> Other ( <i>Specify</i> )	<b>6. HEATING ELEMENT WATT DENSITY:</b> <input type="checkbox"/> 6.5 W/In <sup>2</sup> <input type="checkbox"/> 15 W/In <sup>2</sup>	
<b>4. OPERATING PRESSURE:</b>	psig.	<input type="checkbox"/> 23 W/In <sup>2</sup>	<input type="checkbox"/> 45 W/In <sup>2</sup> <input type="checkbox"/> Other ( <i>Specify</i> )
<b>5. DESIGN TEMPERATURE:</b>	°F Max.      °F Min.	<b>7. HEATING ELEMENT SHEATH MATERIAL:</b>	
<b>6. DESIGN PRESSURE:</b>	psig.	<input type="checkbox"/> Steel	<input type="checkbox"/> Copper <input type="checkbox"/> 304 Stainless Steel
<b>7.</b> <input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		<input type="checkbox"/> 316 Stainless Steel	<input type="checkbox"/> INCOLOY®
<b>8. HAZARDOUS AREA ENVIRONMENT:</b>		<input type="checkbox"/> Other ( <i>Specify</i> )	
Class      Div.      Group		<b>8. TERMINAL SEALS:</b>	
<b>9. AMBIENT TEMPERATURE:</b>	°F	<input type="checkbox"/> Silicone Resin (450°F)	<input type="checkbox"/> Silicone Fluid (500°F)
<i>Heater Specifications (Check All That Apply)</i>		<input type="checkbox"/> RTV (450°F)	<input type="checkbox"/> Epoxy (250°F)
<b>1. RATING:</b>		<input type="checkbox"/> Hermetic (Maximum 1000°F Sheath Temperature)	
Volts      Phase      Kilowatts		<input type="checkbox"/> Other ( <i>Specify</i> )	
<b>2. NUMBER OF ELECTRICAL CIRCUITS:</b> <input type="checkbox"/> Standard		<b>9. TERMINAL ENCLOSURE:</b> <input type="checkbox"/> General Purpose	
<input type="checkbox"/> Other: No. of Circuits      kW/Circuit		<input type="checkbox"/> Moisture Resistant	<input type="checkbox"/> Explosion Proof
<b>3. NOMINAL FLANGE &amp; VESSEL SIZE/NO. HEATING ELEMENTS:</b>		<b>10. TERMINAL ENCLOSURE STANDOFFS:</b>	
<input type="checkbox"/> 3"/3	<input type="checkbox"/> 6"/12	<input type="checkbox"/> 8"/18	<input type="checkbox"/> None <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> Other ( <i>Specify</i> )
<input type="checkbox"/> 10"/27	<input type="checkbox"/> 12"/36	<input type="checkbox"/> 14"/45	
<input type="checkbox"/> 16"/72	<input type="checkbox"/> 18"/108	<input type="checkbox"/> Other ( <i>Specify</i> )	<b>11. BODY FLANGE GASKET:</b>
			<input type="checkbox"/> Standard <input type="checkbox"/> Spiral Wound <input type="checkbox"/> Other ( <i>Specify</i> )

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**Heater Specifications** *(Check All That Apply)*

<b>12. ASME DESIGN and CERTIFIED:</b> <input type="checkbox"/> Yes Section _____					<b>23. HIGH LIMIT TEMPERATURE CONTROL:</b>				
<b>13. ELECTRICAL CODES:</b> National Electrical Code <i>(Standard)</i>					<input type="checkbox"/> None <input type="checkbox"/> T/C on Element (Std) <input type="checkbox"/> Mechanical Thermostat				
<input type="checkbox"/> UL Listed <input type="checkbox"/> CSA Certified <input type="checkbox"/> Other <i>(Specify)</i>					a) <input type="checkbox"/> Type J		a) <input type="checkbox"/> On Heater Jacket		
<b>14. THERMAL INSULATION:</b> <input type="checkbox"/> None <input type="checkbox"/> Standard					<input type="checkbox"/> Type K		<input type="checkbox"/> In Terminal Box		
<input type="checkbox"/> High Temperature <input type="checkbox"/> Weatherproof Jacket					<input type="checkbox"/> Other		b) Temperature Range (°F)		
<b>15. CIRCULATION:</b> <input type="checkbox"/> Unbaffled <input type="checkbox"/> Baffled					<input type="checkbox"/> 0 - 100				
<b>16. NOZZLE SIZE, TYPE and ORIENTATION:</b>					<input type="checkbox"/> 60 - 250				
<input type="checkbox"/> No Standard or as Indicated Below					<input type="checkbox"/> 200 - 500				
<b>Nozzles</b>					<input type="checkbox"/> 300 - 700				
<b>Inlet</b>	1. Size	2. Type	3. Rating	4. Location	5. Orientation	<b>24. SKID MOUNTED CIRCULATION HEATER SYSTEM COMPLETE</b>			
<b>Outlet</b>						<b>WITH CONTROL PANEL WIRED TO HEATER:</b>			
<b>Notes:</b> 16.1 Size is Nominal					a) <input type="checkbox"/> Yes <input type="checkbox"/> No				
16.2 Type is NPT threaded or raised Face Flange					b) <input type="checkbox"/> Vertical Orientation <input type="checkbox"/> Horizontal Orientation				
16.3 Rating is 150 Lb. 300 Lb. etc. if Flanged					c) Control Panel <i>(Attach Detail Requirements)</i>				
16.4 Location is A, B or C (from Figure)					<b>25. Other SPECIAL FEATURES:</b>				
16.5 Orientation is 1, 2, 3 or 4 (from Figure)					<b>26. MODEL NUMBER:</b>				
<b>17. MOUNTING POSITION:</b>									
<input type="checkbox"/> Vertical-Terminal Box Up <input type="checkbox"/> Vertical-Terminal Box Down									
<input type="checkbox"/> Horizontal									
<b>18. MOUNTING METHOD:</b> <input type="checkbox"/> Standard or as Indicated Below									
18.1 <input type="checkbox"/> Mounting Lugs-Orientation Number									
18.2 <input type="checkbox"/> Mounting Saddles-Orientation Number									
<b>Notes:</b> Orientation Number is 1, 2, 3 or 4 (from Figure)									
<b>19. LIFTING LUGS on HEATER PIPE BODY:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No									
<b>20. LIFTING LUGS on HEATER FLANGE:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No									
<b>21. DRAIN PIPE-3/4" NPT:</b> <input type="checkbox"/> Yes (Horizontal Mount) <input type="checkbox"/> No									
<b>22. PROCESS TEMPERATURE CONTROL:</b>									
<input type="checkbox"/> None <input type="checkbox"/> Process T/C in Outlet (Std) <input type="checkbox"/> Mechanical Thermostat									
a) <input type="checkbox"/> Type J		a) <input type="checkbox"/> On Heater Jacket							
<input type="checkbox"/> Type K		<input type="checkbox"/> In Terminal Box							
<input type="checkbox"/> Other		b) Temperature Range (°F)							
<input type="checkbox"/> 0 - 100									
<input type="checkbox"/> 60 - 250									
<input type="checkbox"/> 200 - 500									
<input type="checkbox"/> 300 - 700									

CUSTOM  
ENGINEERING